

Medical Community

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Report Documentation Page

Report Date 09Jul2001	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle Medical Community	Contract Number	
	Grant Number	
	Program Element Number	
Author(s) Shaffhid, Igor	Project Number	
	Task Number	
	Work Unit Number	
Performing Organization Name(s) and Address(es) Unknown	Performing Organization Report Number	
Sponsoring/Monitoring Agency Name(s) and Address(es) NDIA (National Defense Industrial Association) 211 Wilson Blvd, STE. 400 Arlington, VA 22201-3061	Sponsor/Monitor's Acronym(s)	
	Sponsor/Monitor's Report Number(s)	
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes Proceedings from Worldwide Chemical Conference, 9-13 July 2001 Sponsored by NDIA, The original document contains color images.		
Abstract		
Subject Terms		
Report Classification unclassified	Classification of this page unclassified	
Classification of Abstract unclassified	Limitation of Abstract UU	
Number of Pages 14		



**“An attack of this kind is not a question
of ‘if’ but ‘when.’”**

Former US Senator Sam Nunn

Principles and Practices

- Early rapid recognition of unusual clinical symptoms or deaths
- Rapid, clear information exchange between clinicians and Public Health organizations
- Detection of high and low frequency events
- Early recognition of outbreaks above “expected levels” of common symptoms, diseases, or deaths
- Not all epidemics are related to bioterrorism
- Do not wait for help – act now

Reportable Diseases

24 hours reporting required:

- Diphtheria
- Measles
- Rubella
- Smallpox
- Yellow Fever
- Plague
- Human Rabies
- Botulism
- Cholera
- Salmonellosis
- Typhoid Fever
- Shigellosis
- Staphylococcus
- Streptococcus

72 hours reporting required:

- Vaccinatable Diseases
- HIV
- Enterics
- Hepatitis (B,C)
- Vector-borne
- Zoonoses
- TB
- Antibiotic Resistant

Possible Delays to Report by Clinicians

- Lack of awareness
- Lack of WMD training in state and local health organizations
- Patient privacy
- Too long medical forms and other documents
- Reporting delays and lapses
- Lack of experience working together with federal, state and local Public Health organizations

Multilevel Laboratory Response Network for Bioterrorism

Level A: Public Health and hospital laboratories. Early detection of biological agent (BA) with low-level biosafety facilities (use clinical data and standard microbiological tests to decide which specimens should be shipped to the next level lab)

Level B: State and local laboratories. Can test for specific agents, minimize false positives, and characterize drug susceptibility

Level C: Academic research centers, state health and federal facilities. Perform toxicity test, nuclear acid amplification, and molecular fingerprinting

Level D: Federal laboratories. Diagnose rare diseases, maintain a strain bank of BA, detect genetically engineered agents, and develop and evaluate new tests and methods

Available Assistance in Medical Communities

- 750 EIS (Epidemic Intelligence Service)
- 300-350 CDC PHA (Public Health Advisors)
- 70 PHPS (Public Health Prevention Specialists)
- Epidemic and Emergency Response Coordinators

(Information from CDC Report, 2000)

How We Can Recognize BA

- Time to recognize BA will vary depending on several factors
- The incubational period poses the biggest danger for epidemiological control
- First symptoms might be first signs of biological attack
- Private clinics and hospitals will be the first responders and possible first victims after a biological attack

Can We Trust Hospitals?

- Unwillingness of some hospitals to accept contaminated victims
- Lack of proper training of medical staff and lack of preparedness in Emergency Rooms and other medical units, result in contamination of hospital floors within minutes or hours
- Lack of ability to properly decontaminate victims and responders
- Lack of personal protective equipment in hospitals



Positive pressure suits worn at Biosafety Level 4 allow investigators to work safely while they develop vaccines and antiviral drugs for viruses such as Ebola.

Principles and Practices

- Hot zones after biological attack
- Hospital layouts may differ but principles are still the same
- Two possible options for local hospitals
- Isolation and security precautions for hospitals, both inside and outside

Principles and Practices

- Stockpiles in the hospitals and casualty collection area (CCA)
- On-call medical units in each hospital that are specially trained on aspects of WMD
- Hospitals that are specifically built and staffed in large cities for any infectious disease outbreaks, rather than smaller infectious disease units in local hospitals

How We Can Isolate the City

- What resources are needed for Quarantine?
- What areas and epidemiological zones must be isolated immediately?
- What about evacuation and the potential dangers of this?
- Prophylaxis must be initiated within hours of confirmed BA delivery

National Pharmaceutical Stockpile (NPS) Program

- For biological and chemical terrorism events
- National repository of antibiotics, chemical antidotes, antitoxins, life-support medications, IV administration, airway maintenance supplies, and surgical items
- Supplement and re-supply state or local Public Health agencies
- Push Packages: for immediate deployment to the airfield closest to the affected area within **12 hours** of the federal decision
- If need more – Vendor Management Inventory (VMI) Packages will be shipped within **24 to 36 hours**

Questions?

